

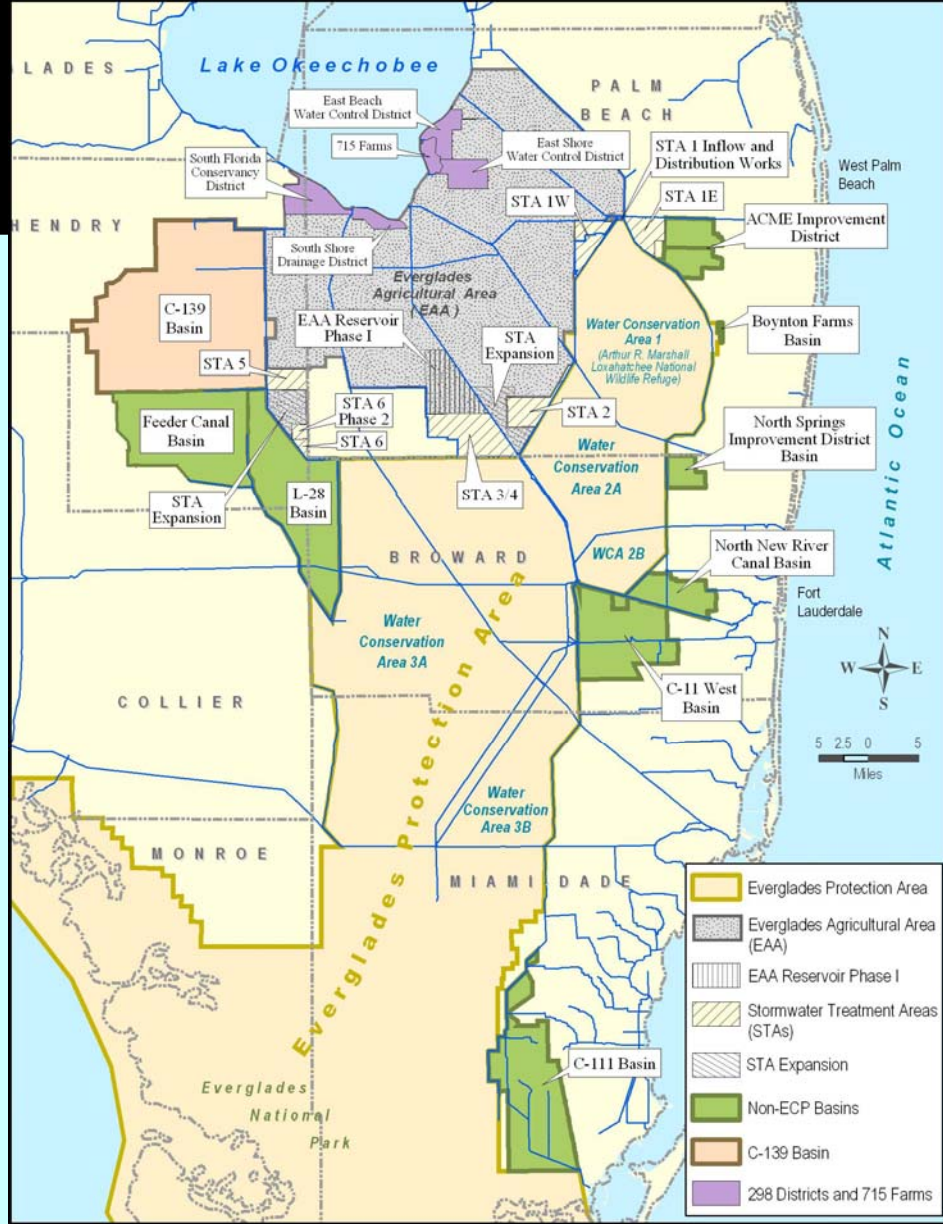
# Everglades Source Control Programs Non-ECP Basins (ESP Basins)

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**Everglades Source Control Programs for Non-ECP Basins**

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**BASINS TRIBUTARY TO THE EVERGLADES**

# Everglades Source Control Programs for Non-ECP Basins



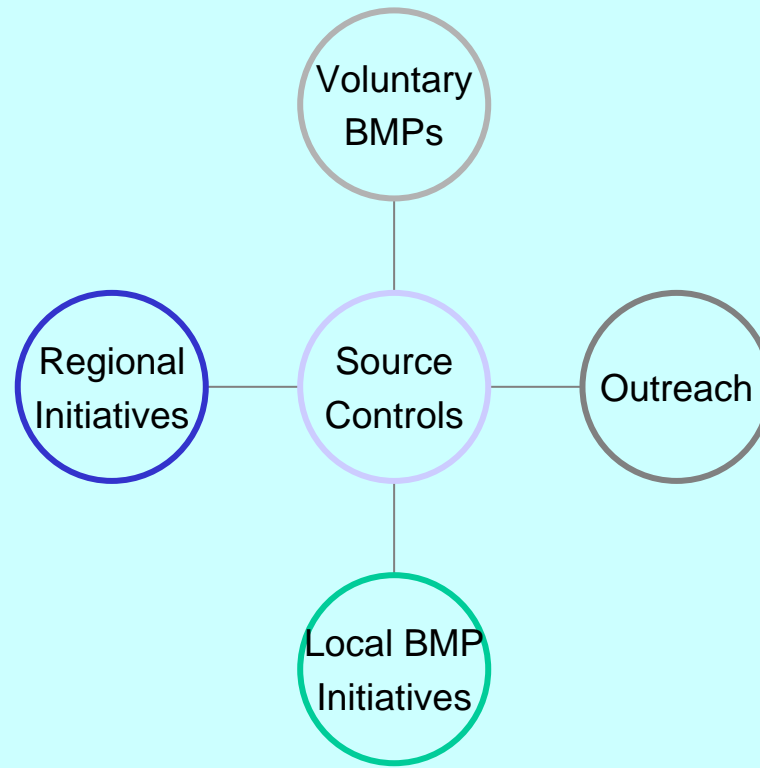
# Statutory Authority

- Everglades Forever Act – 1998 Non-ECP permit required initial implementation of source controls (1998-2003).
- In addition to the Non-ECP Permit requirements, Part 3 of the LTP (Pre-2006 Strategies, ESP Basins) defines supplemental strategies and approaches for water quality improvement in discharges from the Non-ECP Basins.
- In general, the recommended strategy in the Non-ECP basins is to rely upon **source controls** (BMPs) and full integration with CERP to achieve water quality standards.



# Comprehensive Strategy

Objectives are to be carried out using an integrated approach balancing four distinct elements:



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# Source Controls

- Cooperative agreements - monitoring and implementation of BMPs
- On-going and/or proposed local capital improvement projects
- Non-structural BMPs:
  - New permit requirement and/or modification to address water quality concerns
  - Operational changes
  - Public outreach - ESP Public Outreach Plan
  - BMP ordinances



# Long-Term Plan

## Non-ECP strategies funded under LTP (FYs 04-06)

- Source controls

- BMP development and implementation: C-11 West and VOW
- BMP Grant program: Feeder Canal

- Additional analyses

- Ensure no impacts to flood protection: NSID and NNRC
- Water quality improvement measures: C-11 West



# **Broward Everglades Working Group (BEWG)**

- **Background** - In response to a request from Broward County EPD, LTP recognizes that reduction of phosphorus through source controls (i.e., urban BMPs) is of highest priority to achieve compliance with the phosphorus criterion.
- **LTP Project Description** - The SFWMD will assist Broward County in coordinating a county-wide working group to develop a comprehensive pollution prevention plan with specific water quality goals.



# BEWG Partners

- Local Drainage Districts (SBDD, CBWCD, ITDD, BDD, PAID, OPWCD, PAID, NSID) and Local Municipalities (Davie, Cooper City, Sunrise, Weston, Southwest Ranches, Pembroke Pines, Plantation, Coral Springs, Parkland)
- Florida Department of Agriculture and Consumer Services (FDCAS)
- Florida Nursery, Growers, and Landscape Association (FNGLA)
- Miccosukee Tribe of Indians of Florida
- Broward Audubon Society
- Broward Farm Bureau
- Allstate Resource Management
- TrueGreen-Chem Lawn
- Lesco Fertilizer
- First Choice Fertilizers
- Certified Pest Control and Operators Association



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# BEWG

## Major Accomplishments

- Stakeholders participated in the identification of various pollution reduction options, with each agency determining where they could contribute.
- Each party presented an overview of activities underway and to be undertaken in support of the Working Group's objectives and Everglades Restoration.
- Activities and commitments of each stakeholder group were compiled as part of C-11 West Basin Pollution Reduction Action Plan (Draft) [http://www.broward.org/waterresources/c\\_11\\_pollution\\_actionplan.pdf](http://www.broward.org/waterresources/c_11_pollution_actionplan.pdf).



# BEWG

## Planned Activities

- **Cooper City** – Initiated water quality monitoring in support of BEWG program
- **City of Sunrise** – Developing a speakers bureau to meet with HOAs in support of BMPs
- **Southwest Ranches** – Implementing catch basin improvements and swale rehabilitation
- **Town of Davie** – Working with fertilizer retailers to promote low P fertilizers
- **Pembroke Pines** – Reviewing landscape ordinances



# BEWG

## Planned Activities (cont'd)

- **City of Weston (ITDD)** – Bidders on municipal landscape projects must complete a BMP program and use low P fertilizer
- **CBWCD and SBDD** – Investing in infrastructure to provide water quality pre-treatment prior to discharge
- **FDACS, FDEP, Farm Bureau, FNGLA, Broward County EPD and SFWMD** – developed a strategy for encouraging voluntary adoption of nursery BMPs as a first approach, reserving potential regulation as a later option.
- **Drainage/Water Control Districts** – partnered with local agencies, FDACS, and FDEP to further the nursery BMP and grant programs by helping to identify water quality hot spots, share BMP information, and provide water quality monitoring.



# BEWG

## Next Steps

- Maintain momentum through frequent updates with participants, assist partners with implementation, and revise strategy as necessary
- Measure progress through water quality monitoring
- Continue partnership between Broward County & SFWMD to develop pollution reduction action plans for the NSID and NNRC basins and to expand outreach and technical support



## **C-11 W Basin Source Controls**

- SFWMD has provided \$2 million to cost share local capital improvement projects that provide water quality benefits
- SFWMD is working with SBDD and ITDD to modify local pump station permits to provide additional storage and water quality treatment
- SFWMD requires (when needed) additional pretreatment facilities/features for new development
- CBWCD staff does water quality presentations at local elementary schools

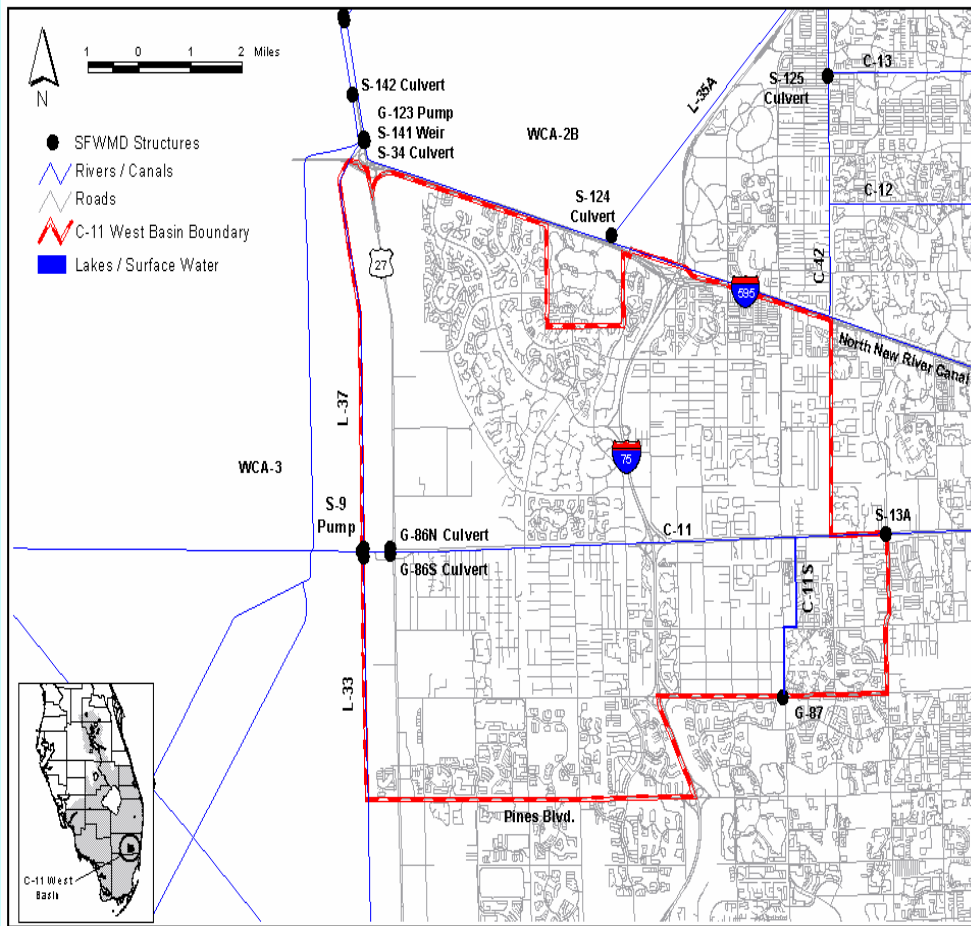


# C-11 W Basin - LTP

Project Manager: Tjerk van Veen

## LTP Project Description:

- Assist local communities in developing, evaluating and implementing source controls.
- Perform feasibility analysis and conceptual design of water quality improvement measures for consideration in the Western C-11 Impoundment PIR. Analysis to include evaluation of potential connection between the Western C-11 Impoundment and the WCA-3A/3B Levee Seepage Management CERP projects.



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# C-11 W Basin - LTP

## Project Status

- Initiated Nursery BMP Grant Program in partnership with FDACS in April 2005
- Public Outreach – Website, Educational Videos (Public Service Announcements)
- Completed contract for preliminary design of Western C-11 Impoundment modifications to reduce phosphorus loads



## C-11 W Basin - LTP

Work planned for remainder of FY 06

- Continue awarding Nursery BMP Grants
- Continue public outreach activities
- Coordinate with Acceler8 implementation of recommended modification to WPA project (C-11 Impoundment)





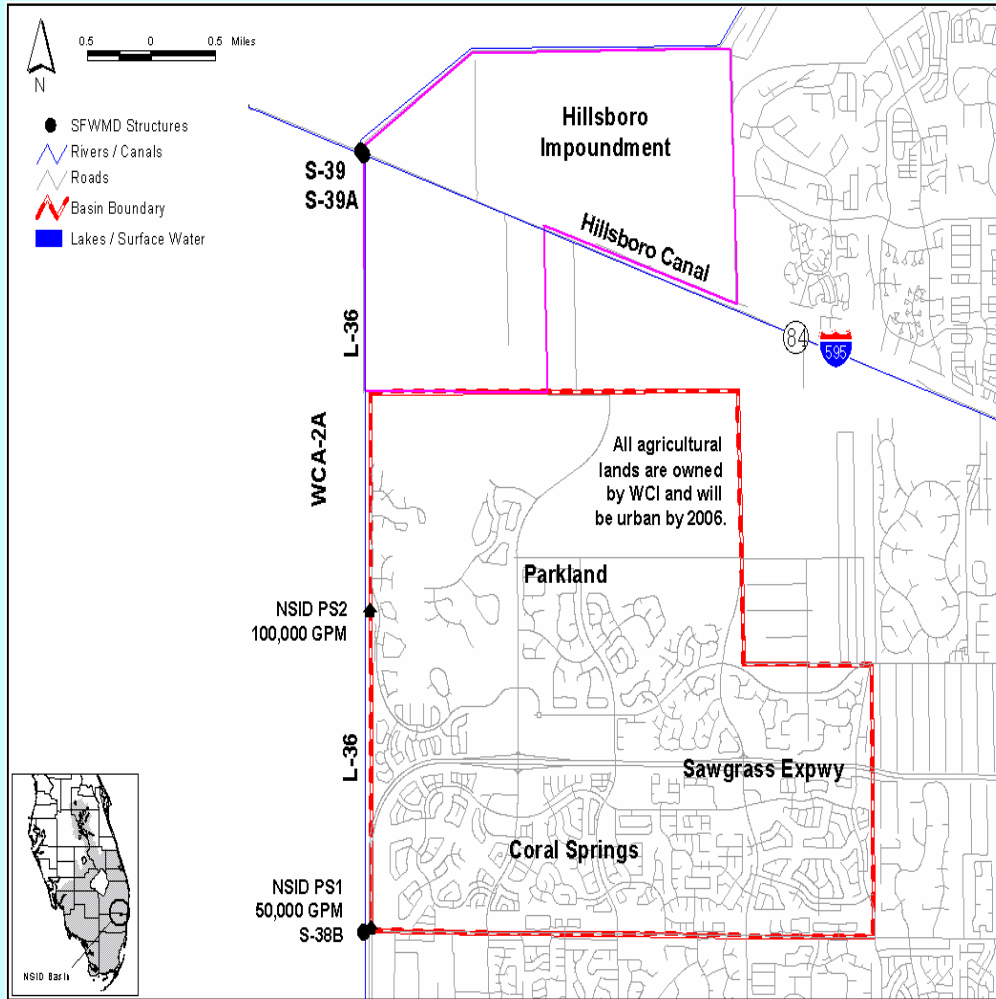
# **NSID Basin**

## **Source Controls**

- NSID has implemented operational changes that have reduced discharges into WCA-2A
- NSID has implemented inter-basin transfers of stormwater to further reduce discharges into WCA-2A
- Newly developed residential and commercial areas include additional storage and water quality treatment
- Renewal of permits for surface water management systems every 5 years



# NSID Basin - LTP



Project Manager:  
Jonathan Madden

## LTP Project Description:

- Perform a hydraulic evaluation of storm events in the NSID basin to determine if there will be negative impacts from redirecting water currently discharged to WCA-2A to the Hillsboro Canal as well as evaluation of the potential for connecting adjacent mining pits to the NSID water management system for additional surface water storage.

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# NSID Basin - LTP

## Analysis Results

- Hydraulic analysis predicted potential impacts to the Hillsboro Canal basin during large storm events
- Costs for schematic alternatives to offset impacts were estimated at \$17 million to \$133 million (50-year present worth)



# NSID Basin - LTP

## Associated Basin Activities

- Updated stormwater flow estimates from NSID to WCA-2A using Regional Model (SFWMM- 2x2) simulation
- Updated annual TP load estimates to WCA-2A



# NSID Basin - LTP

Work planned for remainder of FY 06

- Review alternatives on how to proceed based on findings of study
- Develop pollution reduction action plan through BEWG
- Monitor and assist in implementation of source controls

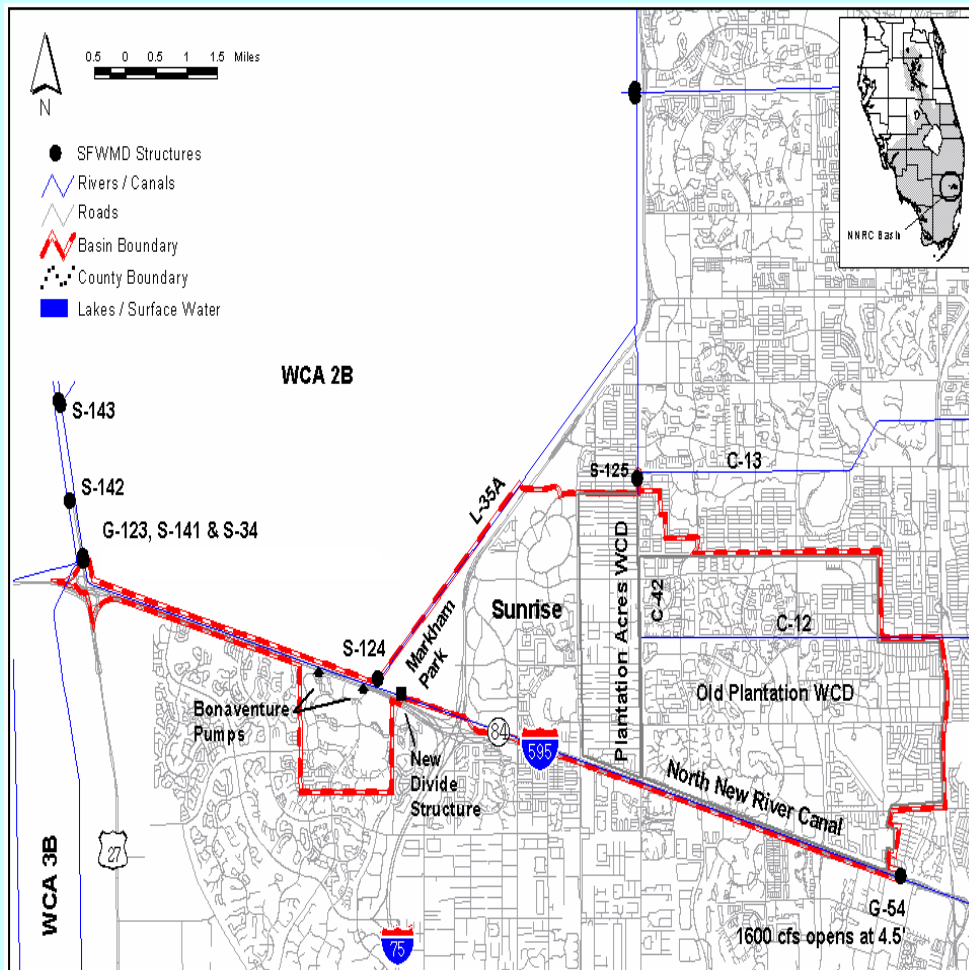


# **NNRC Basin Source Controls**

- OPWCD has implemented operational changes to reduce discharges into NNRC
- BDD's Landscape contractor follows BMPs for Turf and Landscape
- PAID has ongoing program to improve road side swales
- Renewal of permits for surface water management systems every 5 years



# NNRC Basin - LTP



Project Manager:  
Jonathan Madden

LTP Project Description:

- A flood impact analysis will be performed to ensure that the basin's current level of flood protection is maintained if the use of structure G-123 is discontinued.

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# NNRC Basin - LTP

## Analysis Results

- Discontinuing use of the G-123 Structure would reduce the basin's flood protection level
- Schematic costs for canal conveyance improvements estimated at \$47 million to offset discontinuation of G-123 use





# NNRC Basin - LTP

## Associated Basin Activities

- Updated stormwater flow estimates from NNRC to WCA-3A using historical data
- Updated annual TP load estimates to WCA-3A



# NNRC Basin - LTP

Work planned for remainder of FY 06

- Review alternatives on how to proceed based on findings of study
- Develop pollution reduction action plan through BEWG
- Monitor and assist in implementation of source controls



# **Village of Wellington**

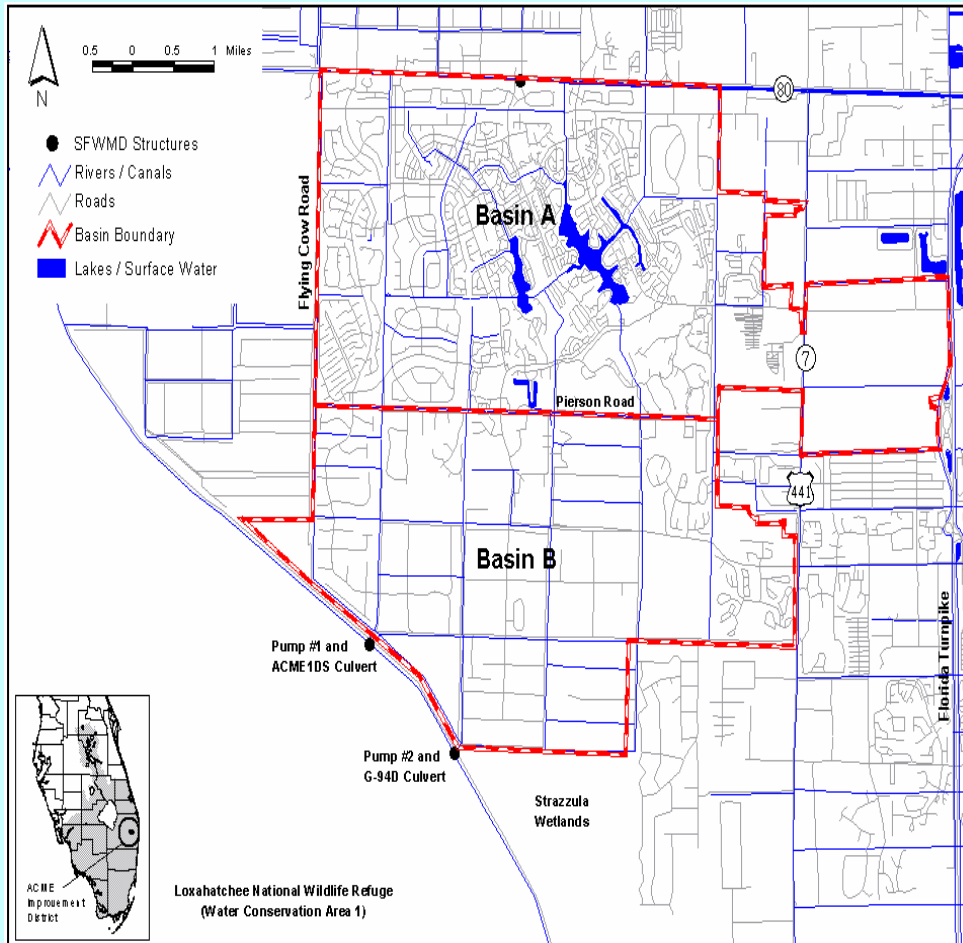
## **Acme Basin B Source Controls**

- Ongoing “Equine Race Track Lake Expansion” to include water quality treatment marsh (to bid)
- Ordinance regulating livestock waste storage and hauling and application of low P fertilizer only
- VOW has dedicated compliance staff for BMP ordinance
- Enhanced requirements for WQ treatment in ERP applications for Basin B
- Dedicated SFWMD staff members to oversee increased compliance and enforcement activities in Basin B



# Village of Wellington

## Acme Basin B - LTP



Project Manager:  
Jonathan Madden

LTP Project Description:

- Assist Village of Wellington in developing, evaluating and implementing source controls.



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# **Village of Wellington**

## **Acme Basin B - LTP**

### **Status**

- Finalizing FY06 cost-share agreement with VOW to develop, evaluate, and implement additional BMPs



# Acme Basin B - LTP

Work planned for remainder of FY 06

- Assist VOW in developing BMP Implementation Plan
  - Locate and remove nutrient rich sediment from canal system
  - GIS database for BMP ordinance compliance
- Additional Public Outreach
  - Update & distribute BMP flyers
  - Local public service videos for television

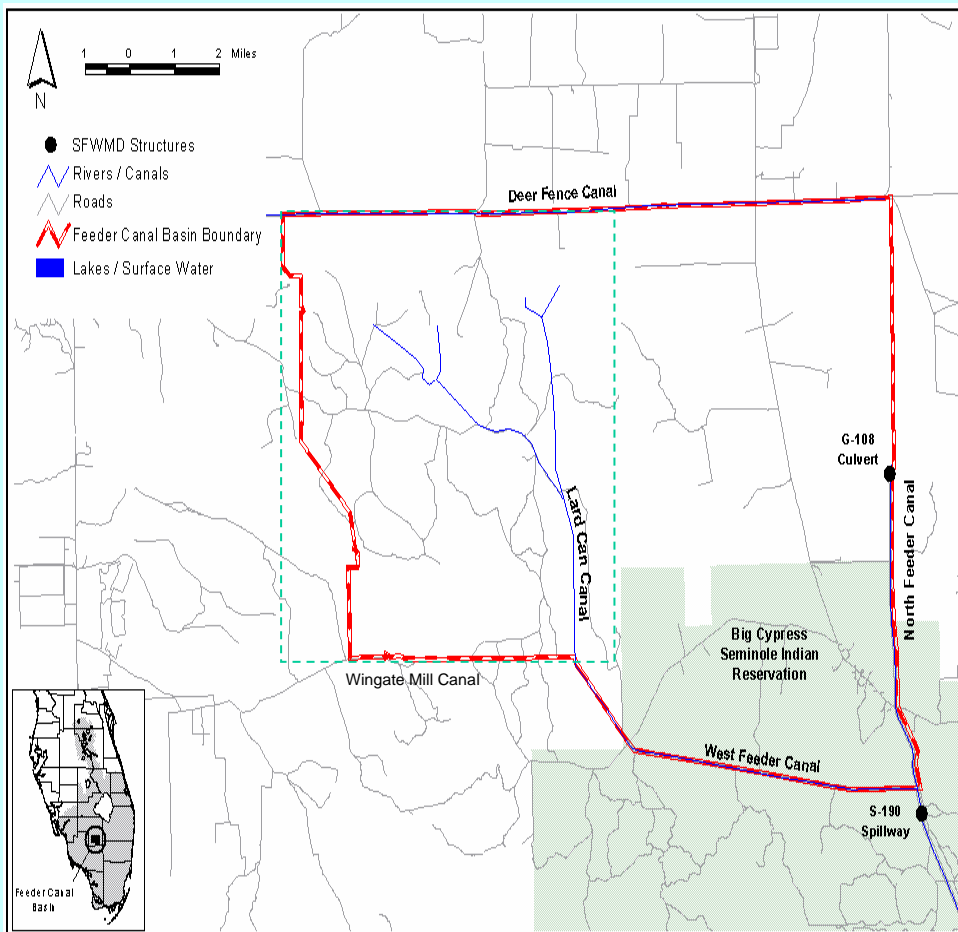


# **Feeder Canal Basin Source Controls**

- Optimize upstream monitoring network
- Coordinate with Seminole Tribe water quality improvements
- Optimize BMPs to comply with water quality requirements
- Ensure new developments comply with stringent water quality requirements



# Feeder Canal Basin - LTP



Project Manager:  
Hongying Zhao

LTP Project Description:

- Develop and implement a voluntary BMP program in the West Feeder Canal Sub-basin.



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[sfwmd.gov](http://sfwmd.gov)



# Feeder Canal Basin - LTP

## Status

- Conducted selection and award process for BMP Grant Program (April and November 2005) in partnership with HSWCD, NRCS & FDACS
- Approximately \$580,000 awarded to projects in Feeder Canal Basin
- SFWMD sponsored workshop for overall strategy to meet WQ goals for Feeder Canal Basin in June 2005



# Feeder Canal Basin - LTP

Work planned for remainder of FY 06

- Continue to monitor implementation of funded BMP projects



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# **LTP and Non-ECP Permit Updates**

Other activities planned for remainder of FY06

- LTP updates/revisions being considered based on:
  - Studies' findings
  - Revised CERP Project Schedules
  - Update basin flow & TP load estimates
- Revised LTP funding recommendations for FYs 07-10 (currently LTP only allocates funds for Non-ECP projects in FYs 04-06)
- Coordinating development of TBELs for Non-ECP permit compliance with FDEP



# Additional Information



Chapter 3: Phosphorus Controls for the Basins  
Tributary to the Everglades Protection Area  
<http://www.sfwmd.gov/sfer/>



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